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A Survey of the Use of Audio-Visual Aids in Typewriting in the State of North Dakota

Adolph E. Beich

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A SURVEY OF
THE USE OF AUDIO-VISUAL AIDS IN TYPEWRITING
IN THE STATE OF NORTH DAKOTA

A Thesis
Submitted to the Graduate Faculty
of the
University of North Dakota

by
Adolph E. Beich

In Partial Fulfillment of the Requirements
for the Degree of
Master of Science in Education

August
1952

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This thesis, submitted by Adolph E. Beich
in partial fulfillment of the requirements for the
Degree of Master of Science in Education in the
University of North Dakota, is hereby approved by
the committee in charge of his work

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CHAPTER I

INTRODUCTION

Educators are always looking for newer and better methods to make their profession vital and progressive. There is pressure from the public to speed up our educational procedures, which in turn necessitates improving the methods of teaching. Audio-visual aids are one of the recent educational developments that promises to have a great educational influence on the instructional program because it can be used directly in actual teaching.

(Audio-visual aids may be any aid which appeals to the sense of hearing as well as sight.) Some teachers consider audio-visual aids as being synonymous, but the motion picture is only one of the many audio-visual aids.

The statement, "One picture is worth ten thousand words," has no greater meaning than when applied to typewriting instruction. Among the audio-visual aids being used in teaching typewriting are motion pictures; filmstrips; opaque projectors; slides; blackboards; bulletin boards; charts and graphs; textbook illustrations and flat pictures; phonographs; metronomes; teacher demonstrations and demonstrations by guest typists; field trips and others.

There are some who tell us that we should imitate the visual-aid program of the Army and Navy. It is claimed that the Army and Navy have learned the magic way of teaching through the use of audio-visual aids and that schools could do the same. Before we think of adopting such a program, we must remember that the Army and Navy spent millions of dollars whereas the schools have only a few dollars to spend each year. Audio-visual aids have their limitations. Too many teachers think that using audio-visual aids is a magic way to eliminate the work of teaching. Audio-visual aids are not a substitute for teaching. The proper use of these aids means harder teaching, but more effective teaching.

Some of our oldest types of visual aids (such as the blackboard, the textbook illustration, the chart, and the demonstration) are still the most valuable and versatile visual aids, and one must not discard these teaching helps in his enthusiasm for the more modern ones. If audio-visual education is used properly, it will lead the student to think, to make his own discoveries, to draw his own conclusions, and to apply the skills and knowledge he has learned to related subjects.

Statement of the Problem

Over a period of years many articles have appeared in business education literature advocating the effective use of

audio-visual aids. There appears to be a need for research in finding out to what extent aids are actually being used and the purposes for which they are used.

The Purpose of This Study

The purpose of this study is to find out the extent to which the aids are actually being used and the reasons for their being used in the state of North Dakota. It also is the purpose of this study to help the typewriting teacher realize the audio-visual aids that are available to typewriting teachers, their values, and how they may be used.

Delimitation of the Problem

This study has been limited to all schools with an enrollment of 70 students or more. Many high schools in the state of North Dakota with an enrollment of less than 70 students either do not teach typewriting or else they do not have a teacher qualified to use audio-visual aids nor the money to purchase audio-visual aids.

Another limitation to this study was the fact that only the most common audio-visual aids were studied. The aids studied were: films, filmstrips, blackboards, bulletin boards, charts, textbook illustrations and flat pictures, phonographs, metronomes, teacher and guest demonstrations, and field trips.

Some of the audio-visual aids not commonly used in the teaching of typewriting are: radio, television, maps, globes, models, projects, and dramatization. Although these aids are very effective in other subjects, they were not included in this study.

Method of Procedure

The information for this thesis was secured by two basic methods:

The first step was to find out the aids actually being used by typewriting teachers. The data for this study was secured by the use of a questionnaire. These questionnaires were sent to 111 teachers of typewriting in the state of North Dakota.

The second step included a thorough study in the field of audio-visual education concerning the specific aids available in typewriting instruction, the value of these aids, and the methods in which these aids are being used, as described in books, periodicals, monographs, and reports.

Questionnaire Returns

Questionnaires were sent to 111 schools in the state of North Dakota. Of these 111 questionnaires, 60 replies were returned. This represents a 54 per cent return. A copy of this questionnaire is included in Appendix B.

CHAPTER II

HISTORY OF AUDIO-VISUAL AIDS

Visual and audio-visual aids have been used as vehicles of instruction from about the beginning of time. Man has used his inventive ability to develop and adapt them in various ways.

The visual and sensory aids are of recent origin as far as professional literature is concerned, but the method is very old. When primitive man taught his son how to hunt and fish, he did not assign a lesson from the textbook. All he did was to show him how to do things; in other words, he used visual education.¹

Even after man ceased roving and settled down to an agricultural life, he continued to teach his children how to do things by showing them how--visual education. The (orientals) used shadow pictures and puppets for thousands of years in providing entertainment as well as religious and tribal instruction. About 1000 B.C., Emperor Muh of China staged several puppet shows for his friends and then angrily dismissed the troupe in disgrace because he claimed the puppets were too much interested in his ladies.²

¹R. G. Walters and C. A. Nolan, Principles and Problems of Business Education, Chicago: South-Western Publishing Company, 1950, p. 198.

²Harry C. McKown and Alvin B. Roberts, Audio-Visual Aids to Instruction, New York: McGraw-Hill Book Company, 1949, p. 8.

During the Middle Ages, sculptures, stained glass representations, and paintings of cathedrals were used for instructional purposes. Sand, boards, and slate, on which marks were made and diagrams were drawn, were the precursors of the modern blackboard for centuries. In 1658, Comenius's famous "Orbis Picture," was the first example of an illustrated printed book.

With the invention of photography by Niepce and Daguerre, the way was made clear for newer inventions such as films, filmstrips, and other modern aids.¹

The simpler forms of audio-visual aids have been used in general for a long time, but their use has been neither systematic nor planned. Edison showed his motion picture machine to the public in 1894, but it was not until shortly before World War II that teachers and educators have become fully aware of its importance. Such materials as the slide, blackboard, and bulletin board have literally experienced a renaissance.

Research studies in visual education made great progress in the twenties, and since 1930 several doctoral dissertations have been written on various aspects of visual education while hundreds of theses have been written for master's degrees.)

¹Ibid., p. 10.

CHAPTER III

THE VALUE OF AUDIO-VISUAL AIDS

At the present time audio-visual aids are receiving a great deal of attention, not that their use is new, but rather that (their use is not as systematic or as effective as it might be.) Not all visual aids are equally well adapted to all subjects nor are all aids equally adapted to all phases of a particular subject.

The microscope, which is such an essential aid in teaching biology, has no conceivable place in the teaching of shorthand. Teacher demonstrations, which are indispensable in the teaching of typewriting, have little value in the teaching of history.¹

Using the keyboard charts in the beginning stages of learning to typewrite is very helpful, but the teacher certainly would not want to continue using them after the keyboard has been learned. The same is true with other aids.

Victor Coles says that audio-visual aids are especially effective for the following reasons:²

1. They promote a mental retention of visual impressions.
2. They save time in use and in student understanding.
3. They suggest flexibility in their use.

¹R. G. Walters and C. A. Nolan, op. cit., p. 201.

²Ray G. Price, Auditory and Visual Aids in Business Education, Monograph 66, Cincinnati: South-Western Publishing Company, 1946, pp. 8-9.

Mental Retention. Navy tests revealed that facts learned were remembered up to 55 per cent longer when audio-visual aids were used. W. W. Charters, director of educational research, Ohio State University, found that on tests of general information, retention was lasting since the percentage of increase between the pretest and the same test given a month and a half after the showing of pictures was nearly as large as that obtained the day after the picture. Further experimental evidence advanced by certain investigators, such as Arnsperger, Constett, Rulon, Wood, and Freeland point to positive advantages in retaining information over a long period of time.

Time Saving. A great deal of time is saved with audio-visual aids because of the faster, clearer and longer-lasting impressions. (Learning and teaching time are greatly reduced because the students have greater interest and consequently give them their undivided attention.)

Flexibility. The same films, same set of slides, or same pictures for the opaque projector may be shown to five students or to one hundred students simultaneously. In addition, audio-visual aids may be easily transported or can be stored in a relatively small place.

Exton describes the power and effectiveness of the sound motion picture as an instructional aid as follows:¹

¹William Exton, Jr., Audio-Visual Aids to Instruction, New York: McGraw-Hill Company, 1947, p. 55.

The sound motion picture is the most nearly complete in realism of all the media available to man for the presentation of ideas. The cinematography can provide a continuous, convincing, two-dimensional photographic visualization of the subject; the sound strip can provide the appropriate auditory accompaniment on an even more realistic basis. The combination of the two can be so effectively realistic as readily to absorb the attention and engage the emotions of the audience. While a comparable effectiveness and power may be and often are achieved by the ordinary written or spoken or recorded word or even by a single picture, nevertheless, none of these media offers the potent, insistent, and almost unavoidable demand upon the attention that is the distinguishable characteristic of the sound motion picture. The ear is challenged by the sound. The eye is attracted--and not only by the visual material provided, but also by the fact that the subject is in motion. Concentration is further intensified by the contrast of the luminous screen with the surrounding darkness; there is nothing competing for the visual or auditory attention. It is obvious that such a medium offers vast opportunities to those who would advance the effectiveness of training and instruction.

Actual tests and not hearsay reveal the dominance of the eye over the ear to the student. According to Dr. Metfessel, experiments in his laboratory show that 65 per cent of knowledge is absorbed through sight, 25 per cent through hearing, and 10 per cent through touch, taste, and smell.¹

Other authorities state that experiments have tended to prove that 83 per cent of our learning reaches us through the eyes and only 17 per cent through other senses.

This evidence, whether it is exactly right or not, does show us that visual experience is a powerful tool in the hands

¹Clifford Ettinger, The Selection of Visual Aids for Business Education, 14th Yearbook, Eastern Commercial Teachers Association, p. 322.

of an instructor. There is, however, a strong relationship between verbal instruction and audio-visual instruction. Visualizing cannot be separated from verbalizing--the two must work together. It is obvious that the teacher who says, "Today we will have a movie," but makes no preparation for it or does not follow up with what is being taught, is not going to get the results that are possible.

A great deal of experimentation is being done to perfect the machines and devices to make them readily available, to train users, and to educate those who must utilize them in the schools.

Colleges and universities are now offering courses in the use of audio-visual aids, which in turn make it possible for the teachers to get the most out of these audio-visual materials.¹

The findings of a research study indicated that audio-visual aids can accomplish the following things if used properly:²

1. Audio-visual aids provide an effective means of influencing all kinds of concrete factual information of learners.
2. The use of audio-visual materials results in greater permanence of learning.

¹Paul Solberg, "Motion Pictures and Filmstrip in Northwestern Minnesota High Schools," Master's Thesis, University of North Dakota, 1949, p. 6.

²Eileen Marie Miller, "The Effective Use of Audio-Visual Aids in Typewriting Instruction," Master's Thesis, Northwestern University, School of Education, 1948.

3. Audio-visual aids are of value as a means of developing the ability to think.
4. Audio-visual aids can be used as a powerful means of influencing attitudes and behavior responses.
5. Audio-visual aids can be of great assistance in the development of habits and skills.
6. Audio-visual aids have value as a means of gaining and holding the interest of the learner.
7. Audio-visual aids have value as a means of bridging inequalities of pupil experiences, and to a limited extent, pupil ability.
8. In some subjects, audio-visual aids may be used with effectiveness to instruct large groups of learners at the same time.

Up to this time the values of audio-visual aids have been discussed in general without specific reference to typewriting. In typewriting, however, the teacher should attempt to use every tool that is available. He must select the methods, devices, and tools which will give the best results and which he can best use. The advantages listed for audio-visual aids in previous pages are basically the same for typewriting. There are several considerations that should be observed before adapting them for use in the particular classroom. The typewriting teacher should do the following:

1. Appraise them in terms of their educational values rather than commercial values.
2. Determine the appropriateness of the aids for the group of students using them.

3. Make certain that all aids are in agreement with modern business practices.
4. Evaluate the results obtained from using these aids in terms of the amount of time required to handle them.

Summary

It is an established truth that audio-visual aids are an effective tool in the potter's hands. Audio-visual aids must be adapted to the subject and the subject matter for which they are best suited.

Specific methods for using the aids will be discussed in detail in Chapter IV.

CHAPTER IV

A STUDY OF AUDIO-VISUAL AIDS USED BY TEACHERS OF TYPEWRITING IN NORTH DAKOTA

The value of the audio-visual aids have been discussed in general in the previous chapter. This chapter will be confined exclusively to a discussion of the effective use of audio-visual aids in typewriting and the extent to which audio-visual aids are actually being used by the teachers of typewriting in North Dakota. The information received brought out a number of interesting facts. These data will be discussed separately under their respective headings.

I. FREQUENCY OF USE OF AUDIO-VISUAL AIDS

Table 1 reveals the fact that teachers of typewriting are not using audio-visual aids to any great extent. Of the 60 schools returning replies, 7 per cent indicated films were often used, 32 per cent seldom used, and 62 per cent never used. Filmstrips are being used by the teachers in North Dakota even less than films. Only 2 per cent of the schools indicated that filmstrips were often used, while 13 per cent listed seldom used, and 85 per cent never used.

Among the reasons for failure to use the projected audio-visual aids are:

1. Insufficient funds to buy or rent projected aids.

2. Teachers are not sold on the educational value of these aids in comparison to their cost.
3. Lack of knowledge concerning the location from which projected aids may be secured.
4. Inadequate and in some cases no equipment available to project films and filmstrips.
5. Unsatisfactory location for projecting aids.
6. Lack of time to set up the equipment.

Blackboards are one of the most commonly used aids of all the audio-visual aids listed. This aid is being often used by 82 per cent of the teachers of typewriting, seldom used by 12 per cent, and never used by only 7 per cent. The reason for its extensive use is quite obvious. Most of the schools have some blackboard space. Next to shorthand, typewriting adapts itself to the use of blackboards better than most other subjects, especially in the early stages of learning.

Bulletin boards are also well adapted as an aid to typewriting. This is brought out by the fact that 77 per cent use the bulletin board often, 18 per cent seldom, and only 5 per cent not at all. In most cases where bulletin boards are not used, they are not available for use.

Charts were the only aid which were being used by all of the teachers who returned the questionnaires. There is some disagreement as to the value of some of the charts, and of course certain kinds of charts were used more than others but, nevertheless, 73 per cent indicated charts are often used and 27 per cent seldom used.

Table 1

Frequency of the Use of Audio-Visual Aids
by 60 Schools in the State of North Dakota

Aids	Often Used	Per Cent	Seldom Used*	Per Cent	Never Used	Per Cent
Films	4	6.6	19	31.7	37	61.7
Filmstrips	1	1.7	8	13.3	51	85.0
Blackboards	49	81.7	7	11.7	4	6.6
Bulletin boards	46	76.7	11	18.3	3	5.0
Charts	44	73.3	16	26.7	0	0.0
Textbook illustration and flat pictures	38	63.4	17	28.3	5	8.3
Phonograph	4	6.6	22	36.7	34	56.7
Metronome	2	3.3	3	5.0	55	91.7
Teacher demonstration	38	63.4	17	28.3	5	8.3
Demonstration by guest expert*			8	13.3	52	86.7
Class trip	0		5	8.3	55	91.7

*Seldom used column is used for "yes" reply for demonstration by guest expert.

Textbook illustrations and flat pictures were combined in the questionnaire. This aid is being used to quite an extent also. The questionnaires indicated this is often used by 63 per cent of the teachers, seldom used by 28 per cent, and never used by 8 per cent.

The phonograph and metronome are two of the auditory aids which can be very helpful but are not used very much. The

phonograph is used more than the metronome, but the failure to use these aids is due to the fact that neither is available in the small high schools of North Dakota. The metronome is not being used by 92 per cent of the schools as indicated by Table 1.

Teacher demonstration is the one aid which many believe every teacher of typewriting should utilize, yet 8 per cent of the teachers do not demonstrate to their students. A detailed discussion will be made of this aid under its respective heading. Questions concerning demonstration by guest typists were planned for a "yes" and "no" response. Only 13 per cent of the schools have had guest typists visit class, while 87 per cent have never had a guest expert demonstrate to the typewriting students.

Class trips certainly can be a very effective aid in typewriting, yet 92 per cent of the teachers have never taken their class on an excursion away from the school grounds.

II. PURPOSES AND USES OF AUDIO-VISUAL AIDS IN NORTH DAKOTA

Films

Projected aids include such aids as the motion picture films (both silent and sound), filmstrips, opaque projector, overhead projector, and slide films. This discussion will be limited to the motion picture film.

The 16mm silent and sound motion picture film represents the largest group of commercially produced films used by the

schools at the present time. Another type of film being used is the 35mm; however, this is the standard size used by theaters.¹ Normally the 35mm is used only in the large school auditorium where the projector is kept in one place.

The 8mm film is now receiving considerable attention. This film is only one-half the width of the 16mm and costs only about one-fourth as much as a similar footage of 16mm. A study was made by Paul Solberg of the projection equipment possessed by 40 schools in Minnesota, North Dakota's neighboring state. This study revealed that of the 40 schools, each school had at least one 16mm projector.² North Dakota would be quite similar of course to Minnesota also having 16mm projectors available for typewriting teachers to use for projecting the 16mm typewriting films.

The value of audio-visual aids have been discussed in general in a previous chapter. Films as a specific audio-visual aid in typewriting can make such contributions as the following:³

1. Bring into the classroom that which is beyond the power of the students to experience in any other way.
2. Show processes during which attention is focused upon important parts that have been magnified to screen size.

¹Harry C. McKown and Alvin B. Roberts, op. cit., p. 226.

²Paul Solberg, op. cit., p. 15.

³Visual Aids Handbook, Curriculum Bulletin No. 40, Cincinnati Public Schools, Board of Education, 1940, p. 10.

3. Show slow continuous action speeded up.
4. Show action that is normally unobservable.

Eileen Marie Miller says the following concerning motion pictures in typewriting:¹

The motion picture contributes much to the knowledge and requirements of skills in typewriting throughout the beginning and advanced course. It provides motivation of the real kind, it offers skill improvement, information which is essential to progress, teaches the pupil the right standards of work, and self-criticizes and presents features of typewriting for attention and practice.

Purpose for Using Films. The problem of when and for what purpose films should be used has brought about a great deal of attention by business educators. This study was organized to examine the purpose for which films and filmstrips are actually being used by teachers of typewriting in the state of North Dakota.

The number of schools using films was rather interesting. Of the 60 replies, only 23 schools have used films sometime during the school year. The questions as to the purpose for which films and filmstrips are being used is similar to the questions asked in the evaluation sheets used by many schools.

As revealed by Table 2, films were used as an introduction to a unit by 17 per cent of the 23 schools. Keyboard presentation was the purpose listed for 13 per cent of the replies, teaching techniques 52 per cent while supplementary knowledge was listed

¹Eileen Marie Miller, op. cit., p. 35.

Table 2
Purpose for Which Films Are Being Used
by 23 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Introduction to unit	4	19	17.4
Keyboard presentation	3	20	13.0
Teaching techniques	12	11	52.2
Supplementary knowledge	14	9	60.9
Review	4	19	17.4
Summary	2	21	8.7

as the most common purpose for using films, having a positive response of 61 per cent. Review received a positive response of 17 per cent, summary 9 per cent. Some of the schools listed more than one purpose for using films.

In order to ascertain which films are being used by teachers of typewriting the following question was asked: "What films have you used within this school year? List titles?" The response to this question was interesting. Of the 23 schools stating that films were either often used or seldom used, 10 indicated the films that they had shown to their classes. Some of the schools said that they had used films but not within this school year. The remaining schools said films were used but did not indicate the specific titles.

Table 3
Films Used by 10 Schools in
North Dakota

Name of film	Frequency of Mention
Albert Tangora in Action	1
Advanced Typewriting: Shortcuts	1
Basic Typing: Machine Operation	2
Basic Typing: Methods	3
Techniques of Typing	3
Care of the Typewriter	1
Electric Typing Time	3
Typing Tips	1

There are various sources of information listing the films both silent and sound that have been produced for use in typewriting instruction. The following is a list of films as given by film guides, periodical literature, and unpublished materials:

ADDRESSING ENVELOPES. Business Education Films, 1949, 12 minute sound, black & white. Sale \$55. Rental \$2.50. Produced by Zoa and Frederick Wahl.

Motion is slow enough throughout for the learner to follow the models. Systematic repetition teaches much in one showing.

ADVANCED TYPING: DUPLICATING AND MANUSCRIPT. UW-Govt., 1943, 26 minute sound, black & white. Sale \$32.27. Produced for the U. S. Navy by De Frenes and Company.

Demonstrates the proper method of making masters for duplicating machine use, correcting mistakes on a stencil, the use of the illuminated drawing board for tracing lines, making hectograph masters, correcting mistakes when using hectograph ribbons or carbon, use of electromatic hectograph machine, use of various types of duplicating machines, and typing manuscripts with footnotes. Centering on a typewriter, improvising characters or marks that do not appear on the keyboard and reading proofreaders marks are also explained.

ADVANCED TYPING: SHORTCUTS. UW-Govt., 1943, 35 minute sound, black & white. Sale \$42.54. Produced for the U. S. Navy by De Frenes and Company.

Stresses the importance of good posture and having your equipment arranged. Demonstrates how to use the tab stops, tab bar, decimal tabulator key. Shows how to handle carbon packs, use the pressure indicator, make proper erasures, insert missing words and letters, remove extra words and letters, type cards, envelopes and labels, and draw vertical and horizontal lines.

ALBERT TANGORA IN ACTION. 16-mm. silent, 15 minutes. Free. Royal Typewriter Company, New York.

ART ON THE TYPEWRITER. 16-mm. silent, 1 reel. Sale and rental consult Bray Picture Corporation.

BASIC TYPING: MACHINE OPERATION. UW-Govt., 1943, 29 minute sound, black & white. Sale \$35.85. Produced by De Frenes and Company.

Demonstrates correct stroking at speeds ranging from 35 to 180 words per minute. The principal parts of a typewriter are pointed out and their function and use is discussed and demonstrated on different machines, together with the correct touch for noiseless, manual, and electric machines.

BASIC TYPING: METHODS. UW-Govt., 1943, 31 minute sound, black & white. Sale \$38. Produced for the U. S. Navy by De Frenes and Company.

Demonstrates the correct posture for typing and proper fingering of the keys; shows the use of the shift key, back spacer, tabulator, carriage return lever, etc. on both manual and electric machines. Discusses the function of various fixtures on the machine. Correct insertion of single sheets and a carbon pack is also demonstrated, together with the use of the paper release and carriage release lever.

BETTER TYPING. 16-mm. sound, 1 reel. Sale \$35, Young America Films, Inc., New York. Rental \$2, Ideal Pictures Corporation, Chicago.

Basic techniques--word patterns and rhythms.

BUILDING TYPING SKILL. 16-mm. sound, 11 minutes. Sale \$45 black & white; \$90 in color, Coronet Instructional Films, Chicago. Rental \$2, nearest films library.

Recommended for second semester typing and secretarial office practice.

CHAMPIONSHIP TYPING. Association Films, 1938, 15 minute silent, black & white. Rental \$2. Produced by Teaching Aids Exchange.

Features Grace Phelan, world's champion amateur typist, in a slow motion study of her work. Emphasizes correct position, touch, and rhythm. Shows Miss Phelan typing at measured rates of speed, varying at ten word intervals, from forty words a minute, with one short demonstration at two hundred words a minute. A slow motion study follows every normal speed demonstration.

DVORAK SIMPLIFIED KEYBOARD. Business Education Films, 1943, 20 minute silent, black & white. Rental \$3.

A time and motion of the typewriter keyboard of the future, developed by Professor Dvorak.

EIGHT PARTS OF A BUSINESS LETTER. 16-mm. sound, 10 minutes. Sale, Walter O. Gutlohn, Inc. Rental \$1.50 Highlands University, Las Vegas, New Mexico.

Each part of the business letter is shown separately and fully explained for punctuation, style, and form. For advanced typing and office practice classes.

IMPROVED DRILLS AND TECHNIQUES IN TYPEWRITING. 16-mm. silent, 31 minutes, 2 reels. Rental \$3.50 for two day's use. Property of John Hay High School. (Howard E. Wheland).

Illustrates shift key technique, carriage throw, finger reaches. Students observe and operate with the demonstrator.

KEYS TO ELECTRI-CONOMY. Remington Rand, 1950, 25 minute sound, black & white, free-loan.

Demonstrates the Remington "Electri-conomy" typewriter, and presents an approach to the problem of electric vs. manual typing.

KNOW YOUR TYPEWRITER. Business Education Films, 1943, 30 minute sound, black & white. Rental \$3.50.

A detailed study of typewriter techniques. Includes feeding paper, touch control, setting tabulator stops, changing the ribbon, using the noiseless machine, inserting an extra letter in a word, setting margins, centering headings.

KNOW YOUR TYPEWRITER. 16-mm. silent, 45 minutes, 3 reels. Sale \$75, Harmon Foundation, New York. Rental \$4.50 same place.

Technical information and typewriting with the demonstrator.

MAKING EVERY MOMENT COUNT. 16-mm. silent, 1½ reels. Property of Purdue University, Lafayette, Indiana. Rental \$4 at the same place.

Shows proper procedures at work without wasting time.

MAKING THE REMINGTON PORTABLE TYPEWRITER. 16-mm. silent, 1 reel. Rental, the cost of transportation, Remington Rand, Inc., New York.

READY TO TYPE. Coronet, 1948, 10 minute sound. Sale \$50 black & white; color \$100. Educational consultant: D. D. Lessenberry, University of Pittsburgh.

Shows student that readiness is prerequisite to typing efficiency, making all necessary adjustments to the machine and to oneself, getting ready mentally and physically to control the typewriter. The audience watches George adjust his machine and warm up his fingers with an exercise, and take time for conditioning practice to establish control before beginning.

RIGHT--AT THE START. Caravel, 1949, 1 hour & 2 minutes sound, black & white. Sale \$99.68. Rental \$18.75 for three weeks. Produced by Caravel Films. Sponsored by Royal Typewriter Company.

A planned course in basic typing, arranged in 19 sequences for intermittent projection during the first 10 or 15 class sessions. Correct use of the major operative parts of the typewriter, a series of location drills, and a motivation narrative.

TEACHING BEGINNERS HOW TO TYPE. 16-mm. silent, 1 reel, Rental, cost of transportation charges. Remington Rand, Inc., New York.

TECHNIQUES OF TYPING. Sound, 1 reel. Sale \$25, Young America Films, Inc., New York. Rental unknown. (This film is advertised but may not be produced as yet).

TIPS ON TYPING. Underwood, 1946, 21 minute sound, black & white, free-loan. Produced by Ben Greene Film Productions.

Demonstrations are by George L. Hossfield, professional typewriting champion.

TRICKS OF THE TRADE FOR TYPISTS. Association Films, 1940, 15 minute silent, black & white. Rental \$2. Produced by Teaching Aids Exchange.

Demonstrates methods used by professional typists to speed up production. Particular attention is paid to back-feeding, notching carbons, card flipping, and methods of saving seconds.

TYPE RIGHT. Teaching Aids Exchange. 1948, 10 minute sound, black & white. Sale \$50. Rental \$2.

Correct finger position and typing strokes are demonstrated by Dr. Bryce Sardiga, champion typist.

TYPING SHORTCUTS (3 parts) Association Films. 1944, 36 minute sound, black & white. Rental \$6. Produced by Teaching Aids Exchange. Each part may be rented separately for \$2.

Part I illustrates arrangement of desk, insertion of paper in machine, etc. Part II illustrates use of carbon and erasures. Part III illustrates typing of cards, labels, etc.

TYPING FOR VICTORY. Sound, 2½ reels. Sale unknown. Rental free, International Business Machines, New York.

USING THE CARBON PACK. Business Education Films, 1949, 12 minute sound, black & white. Sale \$55. Rental \$2.50. Produced by Zoa Ross and Frederick Wahl.

Demonstrates many little-known points for shortcuts to rapid manifolding and carbon uses while typewriting.

Selection and Showing of Films. The intelligent use of audio-visual aids involves six basic factors: Selection of the

aids, preparation by the teacher, preparation of the students, preparation of the classroom, presentation of the aid, and follow-up of the film.

1. Selection of the Aids

Teachers should check available catalogs and bibliographies to see what aids are available. After selecting those films which he thinks are pertinent to the topic under discussion, he should preview the film to determine whether the aid fits the purpose for which it is to be used.¹ Some of the things to remember in selection of an aid are:²

- a. Is the aid in good condition?
- b. Does it fit the topic which is being discussed?
- c. Does the material presented justify the time used in making the presentation?
- d. Is the aid presented at the maturity range of the class?
- e. Is the trend of the aid utilized in putting across the main point or is the aid filled with extraneous material?
- f. Will the aid help the students to gain the desired objectives?
- g. Is the information gained from the aid accurate?

In making the final selection, the teacher should remember that a few aids well presented are much more effective than a period crowded with their presentation.

¹E. Dana Gibson, Using Audio-Visual Aids in Shorthand and Typing, Address Presented at the Annual Convention of the National Business Teachers Association, December 28, 1946.

²Elizabeth Goudy and Lt. Frances Noel, "Evaluating Audio-Visual Aids," The Business Education World, 25:23, September, 1943.

2. Preparation by the Teacher

The teacher must make preparation for using the film just as he would for a discussion from a textbook. A lesson plan as for any class should be prepared and should include the prediscussions of questions or test, the manner in which the aid will be presented, and the follow-up of the film.¹

The teacher should know the film thoroughly in order to carry on a discussion or to point out specific points which need attention. A film might in some instances warrant being previewed several times before the teacher is ready to use it.

3. Preparation of the Students

The student should be prepared for the use of the aid a day or two before the use. This preparation may take the form of pretesting or discussion and may be accomplished through regular class work that lays the foundation for the information to be presented through the aid. The student's attention should be called to things they should especially look for in the film.

4. Preparation of the Classroom

The classroom should be prepared so that the students can enjoy the aids with a minimum of annoyance. The room must be adequately darkened and chairs arranged so that all can easily view the screen. Each school will have its individual problems for which arrangements must be made.

¹E. Dana Gibson, op. cit., Address.

Teachers or student operators should check on the following details previous to the showing:¹

- a. Threading the film.
- b. Focusing the film on the screen.
- c. Adjusting the volume of the loud speaker.
- d. Darkening the room sufficiently so that the picture will be clear.
- e. Checking the lenses to make sure that they are free from dust particles.

5. Presentation of the Aid

All material needed for the preparation should be on hand before the class convenes. Students should be given proper instruction and be made as comfortable as possible. The aid should not take up the entire period. Time should be allowed after the film for a follow-up discussion.

6. Follow-up of the Films

The presentation should be followed by a discussion of highlights. After the discussion, students should be given the opportunity to practice the things which were shown. Priscella M. Moulton says, "'More paw work and less jaw work' is particularly applicable to a skill subject such as typewriting." In some cases, tests that have been prepared should be given after the discussion. Some films might be worth the time to be shown even a second or third time.

¹Priscilla M. Moulton, "How to Show A Motion Picture in the Typewriting Classroom," UBEA Forum, 4:13, January, 1950.

The film should be returned to the company as soon as possible after the showing. If the film is rented, it will not only cost just that much more, but it may cause another school which planned to use it at that time a great deal of inconvenience.¹

Filmstrips

Filmstrips have not been used in typewriting to any great extent. Possibly the reason for the failure to use filmstrips is the fact that so few are available. Filmstrips have many possibilities. Frames can be made to emphasize general information such as care of a typewriter, kinds of typewriters, similarities and differences, parts of the machine, keyboard presentation, teaching techniques, etc.²

One of the advantages of filmstrips over the motion picture is that the filmstrip allows as much time as is needed for study and discussion by the class. This is especially important when something is being taught which is basically hard to understand. Sister M. Speciosa says, "Motion pictures should be used only when motion is necessary to develop the concept to be taught."³

¹Ibid., p. 13.

²Peggy Gibson, "Looking Ahead: The Film Strip," The Balance Sheet, 26:119, November, 1945.

³Sister M. Speciosa, "Audio-Visual Aids in Teaching Typewriting," The Balance Sheet, 31:211-15, January, 1950.

In North Dakota, only 9 of the 60 schools reporting have used filmstrips. The purposes for which filmstrips and films are used are similar.

Filmstrips were used for supplementary knowledge in most instances. Table 4 indicates supplementary knowledge received a positive response of 78 per cent. The next highest reason for using filmstrips (44 per cent) was for teaching specific techniques. Some of the teachers reporting listed more than one reason for using filmstrips.

Table 4
Purpose for Which Filmstrips Are Being Used by
9 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Introduction to unit	3	6	33.3
Keyboard presentation	1	8	11.1
Teaching techniques	4	5	44.4
Supplementary knowledge	7	2	77.7
Review	1	8	11.1
Summary	2	7	22.2

Only a few of the schools listed the filmstrips which they had used. Some of the schools that used filmstrips said

they had not used any thus far this year but had used them in previous years.

The filmstrips which were used are found on Table 5. The filmstrip, "Do You Know Your Typewriter," was mentioned twice. The other filmstrip, "Fundamentals of Typewriting," was mentioned once. This title is not listed, however, in the filmstrip guides.

Table 5
Filmstrips Used in North Dakota

Title of Filmstrip	Frequency of Mention
Do You Know Your Typewriter	2
Fundamentals of Typewriting	1

As the demand increases for projected aids, filmstrips will be sure to be produced as an aid to teaching.

The following 35mm silent filmstrips are available to teachers of typewriting classes:

ADVENTURES IN TYPEWRITING ART. Artistic Typing Headquarters, 4006 Carlisle Avenue, Baltimore, Maryland. Two filmstrips, each \$3. if sold separately; both parts sold at \$5. They may be rented from Business Education Visual Aids, 330 West 72nd Street, New York City, for \$3. each.

DO YOU KNOW YOUR TYPEWRITER? Society for Visual Education, 100 East Ohio Street, Chicago, Illinois, Sale, \$2.

HISTORY OF THE TYPEWRITER. Society for Visual Education, 100 East Ohio Street, Chicago, Illinois, Sale, \$2.

TYPEWRITING SERIES. Ten separate filmstrips. Teaching Aids Exchange, Modesto, California, Sale, \$2 each, or \$15 for the series which are as follows:

- a. Position of machine and typist.
- b. Location of all controls on the typewriter.
- c. Mechanics of machine operation.
- d. The business letter.
- e. Business letter styles and punctuation.
- f. Secretarial Typing, Part I.
- g. Secretarial Typing, Part II.
- h. Secretarial Typing, Part III.
- i. Legal typing.
- j. Artistic typing.

Budgets for Films and Filmstrips. In many of the small high schools of North Dakota no planned provision is made for buying audio-visual aids. In order to ascertain whether budgets were set up, the following question was inserted in the questionnaire: Are budget allowances set up for renting or purchasing films or other typewriting projected aids? If so, how much?

Here are the responses which were received:

We have \$5 to \$10 per department.

Have \$10 per year.

Thirty dollars for each teacher for all of the courses he teaches.

Fifty dollars for the business education department.

One hundred dollars for the whole school.

A few of the schools said they had a budget for the whole school but did not list any amount for typing.

Other schools using films and filmstrips said no budget was set up but they ordered as they needed them.

Since all of the schools have such a small amount of money to invest in audio-visual aids, it is not difficult to

understand why more schools do not purchase films, filmstrips, and other aids.

Authorities in audio-visual education think that schools should purchase films and filmstrips if at all possible. In that way the films are available when they are needed instead of after a unit has been completed.

Table 6
Schools Having Rented and Purchased
Audio-Visual Aids

Name of Aid	Schools Using Aid	Rented	Per Cent	Purchased	Per Cent
Films	23	23	100	1*	4.3
Filmstrips	9	6	66.7	3	33.3

*Grand Forks Central High School is the only school that indicated they have both rented and purchased typewriting films.

In North Dakota films and filmstrips are rented rather than purchased. According to the study as revealed in Table 6, 100 per cent of the schools using films said they were rented. Grand Forks Central High School was the only school that indicated films were rented and purchased.

Table 6 also reveals that 6 of the 9 schools using filmstrips rented them while 3 schools said filmstrips were purchased.

Slides

The glass slide represents one of the simplest but least expensive visual aids that can be made by the student or teacher. The simplest use of the slides is through drawings on etched glass or typewritten material on cellophane. Typewriting technique studies, giving the rules and illustrations of abbreviations, capitalization, expression of figures, punctuation, spacing, syllabication, and symbols can be prepared easily. The two sizes of slides are the 2 x 2 inch slide and the old reliable 3 1/4 x 4 inch slide.¹

Arthur F. Neuenhaus, School Representative of the Royal Typewriter Company in New York City, has prepared a series of 27 colored slides designed for use in teacher meetings and typing classrooms. The slides show the correct use of keyboard and carriage controls, scales, margin setting, corrections, ribbon change, and other tasks. These slides are prepared for use in any 35mm slide projector.

Although these slides are only an experiment, it is evident that teachers with interest and ambition can make their own slides. Mr. Arthur Neuenhaus had a hobby of taking colored shots. He combined his hobby with work.² The slides were used in a demonstration before 30 teachers. Listeners were able to

¹Harry Q. Packer, "Visual Aids in Business Education," The Balance Sheet, 27:383, May, 1946.

²Lewis R. Toll, "Teaching Typewriting Techniques by Slide Films," UBEA Forum, 5:29-30, January, 1951.

see as well as to hear about the use of each special feature. A close-up picture of changing the ribbon was especially helpful in teaching how the ribbon is to be removed and replaced.

This is only one example of what can be done with slides. As more teachers received training in the preparation of slides, they will be used more extensively in typewriting.

Blackboards

Blackboards are one of the oldest forms of audio-visual aids that exist in typing instruction and one that is probably used more than any other aid. It has been taken for granted for so many years that many of the fine features of it are overlooked and abused. Many teachers are overlooking the value of the blackboard in typewriting in their enthusiasm for some of the more expensive aids.

Blackboards can be used for a number of things such as writing out assignments; announcements; conducting drill work; giving lesson directions; teaching various techniques such as tabulation, centering, and envelope addressing; and for displaying the names of students with timed writing scores, etc.¹ These are only a few of the possible uses of the blackboard.

Marguerite Lamar, Butler University, has a number of suggestions for the intelligent use of blackboards.²

¹Sister M. Speciosa, op. cit., p. 211.

²Marguerite Lamar, "How to Use Blackboards Intelligently," Business Teacher, 27:92, December, 1949.

1. Keep it brief.
2. Keep it distinctive.
3. Have it planned.
4. Use graphs.
5. Have forms painted on.
6. Spotlight with color.
7. Don't clutter boards.
8. Standardize assignment spots.
9. Use blackboards for demonstration.
10. Use boards for many class activities.
11. Don't use boards for tests.

Harry Q. Packer compares the blackboard to a store window. An overcrowded, dirty, and untidy window display has little stopping value as compared to one that is clean, neat, and displays a few well-chosen items. Here are rules he lists which apply to good window display and the training blackboard:¹

1. Do not crowd the blackboard. A few important points make a vivid impression.
2. Make the material simple. Brief, concise statements are more effective.
3. Plan blackboards in advance. Keep the layouts in your training plan.
4. Get everything you need for the blackboard before the group meets--chalk, ruler, eraser, and compass.

¹Harry Q. Packer, "Visual Aids in Business Education," The Balance Sheet, 27:281, March, 1946.

5. Check lighting. Avoid blackboard glare. Sometimes it will be necessary to lower a shade and turn on the room light.
6. Use color for emphasis. Yellow and pale green chalk are more effective than white chalk.
7. Print all captions and drawings on a large scale. The material must be clearly visible to each trainee.
8. Erase all unrelated material. Other work on the blackboard detracts attention. Use a board eraser or a cloth and not your fingers.
9. Keep the blackboard clean. A dirty blackboard has the same effect as a dirty window.
10. Prepare complicated blackboard layouts before the group meets.

Table 7

Purpose for Which Blackboards Are Being Used
by 56 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Assignments	46	10	82.1
Announcements	32	24	57.1
Conducting drill work	26	30	46.4
Lesson directions	44	12	78.6
Margin setting techniques	40	16	71.4
Tabulation techniques	45	11	80.4
Vertical & Horizontal centering	45	11	80.4
Progress charts (Write in)	1		1.8
Timed writing scores (Write in)	1		1.8

The blackboard is one of the most commonly used aids for typewriting instruction in North Dakota. This study revealed that 93 per cent of the schools used this aid.

A number of suggested purposes were listed in the questionnaire to determine whether the blackboard was used for the things recommended by some of the writers of our periodical literature.

According to Table 7, blackboards are being used quite extensively for most of the suggested purposes. Assignments received a positive response of 82 per cent. Blackboards were least used for conducting drill work, receiving a positive response of 46 per cent. Blackboards were also used to a great extent for teaching some of the techniques of tabulation and centering. Both received a positive response of 80 per cent.

About twenty years ago an enterprising scholar made a study of how teachers used the blackboards in six Wyoming high schools. The results were as follows: "The 6 schools had available for use by 1,234 teachers and 3,625 students some three-quarters of a mile of blackboard space. Only 54 per cent of this space was actually used.¹ Probably these figures would apply in the schools of North Dakota today too.

Bulletin Boards

Bulletin boards have many possibilities. Students will always glance at the bulletin board as they go to class if it

¹Marguerite Lamar, op. cit., p. 92.

is kept fresh with new and interesting items. The class bulletin boards should be used only for materials that have definite educational value. "The material on the class bulletin board should apply to a definite lesson or unit of work, for a board covered with a hodgepodge of pictures and news items has little value."¹

Some of the things that might be placed on the bulletin board are: special announcements; cartoons to create interest and stimulate thinking; student's work; stories concerning local typists who may have received recognition; pictures of champion typists; pictures of new equipment such as an electric typewriter, automatic typewriter, teletypewriter, etc.

Harry Q. Packer emphasizes the need for careful planning when using the bulletin board. Placing a conglomeration of material on a bulletin board without careful planning would be disastrous. The instructor should:²

1. Collect suitable illustrations for the subjects that he teaches. Eventually, he will have enough bulletin board material to cover nearly all major units of work.
2. Classify and file material for use at the right time.
3. Arrange illustrations on the bulletin board in an interesting manner.
4. Prepare a title and brief description to explain each illustration.

¹R. G. Walters and C. A. Nolan, op. cit., p. 215.

²Harry Q. Packer, op. cit., p. 282.

5. Keep in mind the principles of balance and color harmony when arranging the bulletin board.
6. Use the illustrations on the bulletin board during the development of the lesson.
7. Permit the students to observe the bulletin board after the lesson.
8. Make bulletin board material files available to the students for future references.

Not only should bulletin boards be used properly, they should be used continually. The bulletin board will become a definite spot of interest to the students especially if the students have had a part in selecting and arranging the material. In fact, the bulletin board could become an excellent student project. A committee of students could be organized, which would be held responsible for preparing the bulletin board displays to correlate with the topic being discussed each week.¹

Exhibiting student work is a great incentive to the class to do even better work. Anthony Conte says, "Use the bulletin board or any space available as much as possible to display the work of students. Do not wait for perfect papers before displaying them. If the requirements are too high, they will tend to discourage the students. Any work that is worthy of display should be put up."²

¹Ibid., p. 282.

²Anthony E. Conte, "Incentives for Teaching Typewriting," The Balance Sheet, 31:153, December, 1949.

The newspaper is an excellent source of material for bulletin board clippings. Other graphic and pictorial material may be secured from typewriting companies and book companies for bulletin board displays. E. Dana Gibson has a list of such aids as follows:

1. Bulletins

- a. How To Make Every Letter Better, Royal Typewriter Co., Inc., N. Y., 1940.
- b. Tips to Typists, L. C. Smith & Corona Typewriters, Inc., Syracuse, N. Y.
- c. Royal Presents Easier Typing, Royal Typewriter Co., Inc., 1940.
- d. The "Patty Perfect" Adviser, Underwood Elliott Fisher Co., One Park Avenue, N. Y.

2. Cartoons

- a. Why Typing Teachers Grow Gray, by Summers, Remington Rand, Inc., Buffalo, N. Y.
- b. Sophie, the Super Secretary, see current and back issues of the NEWS-LETTER. Highlands University, Las Vegas, N. M.
- c. Maize, Beautiful, But Dumb, see current and back issues of the NEWS-LETTER. Highlands University, Las Vegas, N. M.

3. Graphs

- a. Keyboard Test of the Remington Typewriters, Remington Rand, Inc., Buffalo, N. Y.
- b. Students' Test of Remington Noiseless Parts, Remington Rand, Inc., Buffalo, N. Y.

4. Posters

- a. Ten Ways to Make Your Typewriter Last Longer, Remington Rand, Inc., Buffalo, N. Y.

Bulletin boards are being used quite extensively by teachers of typewriting in North Dakota. Ninety-five per cent of the teachers reporting used bulletin boards as an aid to instruction.

Table 8
Purpose for Which Bulletin Boards Are Being Used
by 57 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Special announcements	37	20	64.9
Cartoons	35	22	61.4
Students' work*	51	6	89.5
Stories of local typists who have become successful	6	51	10.5
Pictures of expert typists	24	33	42.1
Pictures of electric type-writers and other equipment	28	29	49.1
Literature from typewriting companies	26	31	45.6
Special art designs	24	33	42.1
Graphs and charts (Write in)	4		7.0

*Perfect drill work, perfect letters, etc.

In response to the purpose for which the bulletin boards are used, it is interesting to know that bulletin boards are used for the things suggested by the authorities for audio-visual aids in typewriting. As indicated by Table 8, students' work received a positive response of 90 per cent as a purpose for which bulletin boards are used. Each of the other suggested purposes also received an encouraging number of positive responses.

Richard G. Wright says "If the bulletin board is used properly with an unlimited amount of material usable in the teaching of typewriting, it will change from a minor to a major aid in the learning process."¹

Charts

Charts were one of the visual aids which were being used quite extensively by typewriting teachers. Charts are inexpensive to purchase--in fact, some typewriting companies are willing to give teachers their progress charts free of charge upon request. Some of the charts such as keyboard wall charts, teacher-made progress charts, perforated wall progress charts, and checklists on specific typewriting techniques are very effective as a teaching aid.

The keyboard wall charts can be used the very first day of class for teaching the keyboard. Checklists are frequently used to correct specific techniques for each individual student. The appendix of this study contains a copy of the technique check sheet used by Miss Dorothy L. Travis, Assistant Professor of Special Methods and Student Teaching in Business Subjects, at Grand Forks Central High School. By the use of progress charts, students can be motivated to compete against classmates and against themselves. Teacher-made progress charts, which can be duplicated very easily, are very good for aiding the

¹Richard Gordon Wright, "The Use of Audio-Visual Aids in Typewriting Instruction," Master's Thesis, San Diego State College, 1950, p. 48.

Table 9
Kinds of Charts Used
by 60 Schools in North Dakota

Kinds Used	Frequency of Mention	Per Cent
Keyboard wall charts	58	96.7
Teacher-made progress charts	38	63.3
Workbook error analysis and progress charts	15	25.0
Check lists on specific techniques	12	20.0
Wall progress charts	38	63.3

student to compete against his previous record and as a result motivate him to greater speed and accuracy. A copy of a teacher-made progress chart, which was used by the author, is also included in the appendix.

Further proof of the extensive use of charts is brought out by the fact that all of the 60 schools reporting indicated charts are used in typewriting.

In order to find out what kind of charts are being used by teachers in North Dakota, a checklist of charts was included in the questionnaire.

According to Table 9, it was found that 97 per cent of the teachers used keyboard wall charts. Teacher-made progress charts and wall progress charts were used by 63 per cent of the

teachers. Workbook charts and checklists were, however, not as frequently used.

Textbook Illustrations and Flat Pictures

Textbook illustrations and flat pictures are being used to quite an extent in typewriting, especially during the early weeks of the course. Pictures illustrating the parts of the typewriter, basic typing techniques, and correct posture are very helpful to the beginner. Students can be encouraged to check themselves daily with the illustrations until proper habits of posture and technique are established.

After the basic techniques have been learned, illustrations are used as an aid to teach the more advanced techniques such as typing business letter styles, tabulating, etc.

The study revealed that textbook illustrations were used quite extensively. Of the 60 schools reporting, 55 indicated textbook illustrations and flat pictures were used.

The purposes listed in the questionnaire received a high positive response. Correct arm, hand, and body posture received a positive response of 91 per cent as a purpose for using textbook illustrations. Teaching letter styles was next highest with a positive response of 89 per cent. Flat pictures, which would be used mostly for illustrating new equipment, received a positive response of 27 per cent.

Table 10

Purpose for Which Textbook Illustrations and Flat Pictures
Are Being Used by 55 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Correct arm, hand and body posture	50	5	90.9
Illustrating new equipment	15	40	27.3
Illustrating typing technique	38	17	69.1
Teaching letter styles	49	6	89.1
Business forms (Write in)	1		1.8

Phonograph and Metronome

Most students enjoy the variety phonograph records provide. Students learn to develop speed, accuracy, and rhythm through the use of such recordings.

The metronome which is also used for developing speed, accuracy, and rhythm is being used mostly in the larger schools. Business colleges use this aid more than the high schools.

The questionnaire revealed that the phonograph is used by 26 of the 60 schools reporting, while only 5 of the 60 schools reporting used the metronome. The information received concerning the metronome was of such limited significance that it was not included in this thesis.

Table 11

Purpose for Which the Phonograph is Being Used
by 26 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Stimulating interest	17	9	65.4
Developing speed	6	20	23.1
Developing rhythm	24	2	92.3
Developing accuracy	4	22	15.4

The main purpose for using the phonograph, however, was for developing rhythm. According to Table 11, this purpose received a positive response of 92 per cent.

The Gregg Publishing Company has produced two sets of National Rhythm Records for use in teaching typewriting. These records have different speeds per beat to accommodate the classes as they improve in their typing skill. E. Dana Gibson has the records listed as follows:

Records and Transcriptions

National Rhythm Records

Record No.	Music	Side Beat	WPM
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Set Number One

Six records--twelve selections--List price \$12.

1	Slow Motion March	A	90	14-16
1	Rational Rhythm March	B	100	16-20
2	Keep Step To The Stars and Stripes	A	115	21-25

2	Dancing Fingers March	B	150	27-33
3	Toreador March	A	146	26-32
3	Rational Medley March	B	188	34-40
4	Rule Britannia March	A	195	35-43
4	Flying Fingers Patrol	B	212	38-46
5	Pizzicato Polka	A	224	40-49
5	March On, March On	B	208	38-46
6	Ringin' Anvil March	A	248	44-54
6	March of the Speeding Keys	B	272	49-59

Set Number Two

Three records--six selections--List price \$6.

7	Soldier's Chorus	A	24
7	Aida March	B	23
8	Petersburgh Sleigh Ride	A	32
8	La Cinquantaine	B	36
9	Melody in F	A	42
9	Wein Bleibt Wein	B	

Teacher Demonstration

One of the most significant means of presentation in the typewriting class is personal demonstration by the teachers. Many of the techniques shown in the commercial films can be just as effectively demonstrated by the teacher in the classroom. These other aids such as the film, filmstrip, guest typist, and others help to reemphasize the things that the teacher has taught.

Demonstration refers primarily to the teacher's "here's how" activities or the physical motion he goes through. Lecturing, talking, or telling should be secondary to the demonstration of showing and illustrating.¹

¹Robert Finch, Auditory and Visual Aids in Business Education, Monograph 66, Cincinnati: South-Western Publishing Company, 1946, p. 14.

Demonstration should begin during the very first class period. Students should be taught the correct way to remove their typewriter covers from the machine and how to place them neatly over the back of the chair. Among the many other uses for which demonstration may be used right at the beginning are: paper insertion and removal; carriage return; correct body posture (including hand, arms, feet and back); stroking technique; use of shift keys; tabulator; back spacer; space bar; and others.

The teacher will want to redemonstrate correct techniques each day so that students will acquire the correct habits right from the start and continue that way.

Students will be motivated to strive for greater skill if they see that the teacher practices what he preaches. Proper carriage return, proper stroking, and rhythm can be demonstrated right with the class, the teacher setting the pace. Unlike some of the other aids, teacher demonstration can be arranged to fit the particular needs of the class.

Frank F. Sanders, Supervisor of Commercial Education, Pittsburgh Public Schools, Pittsburgh, Pennsylvania, has the following to say concerning demonstration in typewriting:¹

It seems paradoxical that teachers should need to be urged to show students how to typewrite rather than to tell them how.

¹Frank F. Sanders, "Demonstration in Typewriting," The Balance Sheet, 31:105, November, 1949.

The teacher may state, and justly so, that he does demonstrate, that he sits down at the machine to show a student certain techniques in which he needs improvement. That is excellent as far as it goes, but it does not go far enough. It does not provide for group instruction on key stroking, operation of machine parts, remedial drill, or the introduction of any new phase of typewriting. A teacher may be reluctant to attempt demonstration because he feels his techniques are too poor. By starting to demonstrate with a beginning class, even though mediocre, it will seem so far above the skill of the students that it appears to them to be excellent.

Eileen Miller gives four advantages of the demonstration over a still picture or even a motion picture. They are as follows:

1. It is more interesting to the student.
2. It can be seen from three dimensions instead of from two.
3. It can be varied to suit the need of the occasion.
4. It is possible to repeat such parts of the demonstration as are necessary to impress them upon the students.

It is evident that the teachers of typewriting in North Dakota are aware of the value of teacher demonstration as indicated by the number that use this aid. Of the 60 schools returning questionnaires, 92 per cent of the teachers indicated that "teacher demonstration" was either often used or seldom used. Many of the schools that indicated demonstration was seldom used or even never used did say they wanted a demonstration stand.

The positive responses in reply to the suggested purposes for which teacher demonstration could be used was very

Table 12

Purpose for Which Teacher Demonstration is Being Used
by 55 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Paper insertion and removal	52	3	94.5
Correct stroking	51	4	92.7
Carriage return	53	2	96.4
Tabulator technique	36	19	65.5
Marginal adjustments	39	16	70.9
Correct posture	35	20	63.6
Centering	34	21	61.8
Crowding and spreading	30	25	54.5
Erasing	37	18	67.3
Letter styles	11	44	20.0
Eyes on copy	37	18	67.3
Motivation	29	26	52.7
Carbon & Stencil insertion (Write in)	1		1.8
Chain envelope feeding (Write in)	1		1.8

high. Generally, however, those purposes which taught specific techniques received the highest positive response, such as, carriage return, paper insertion and removal, and correct stroking. The percentages for each is given on Table 12.

Letter styles received the lowest positive response. This purpose had a positive response of 20 per cent. Carbon and stencil insertion, and chain envelope feeding, which are listed on Table 12, were purposes added to the list but were not included in the questionnaire.

Table 12 does reveal that demonstration is used for teaching almost all of the techniques of typewriting. With increased training, teachers of North Dakota will demonstrate even more than at the present time.

During the past ten years there have been a number of articles in the periodical literature with suggestions for making a demonstration stand.

The high cost of a manufactured demonstration stand has been a prohibitive factor in most schools. The teacher is usually unable to justify the cost to himself or to his administrator. Frank Sanders says, "The classroom desk does not substitute for the demonstration stand because it is too low for more than a few students to observe what is taking place."¹ The question comes up, what shall the teacher do if the school will not buy a demonstration stand? There are a number of answers to this question. First of all, the school could build a home-made stand at a very reasonable price. Frank Sanders gives the plans for building a home-made stand for the approximate cost of \$5. It is assumed, however, that no labor charge

¹Frank F. Sanders, op. cit., p. 105.

will be assessed when the stand is constructed. The school having an industrial arts department could make arrangements to have it made by that department. The plans for this stand may be found on page 106 of the Balance Sheet, November, 1949.¹

Mr. Lewis R. Oelke, Senior High School, Merrill, Wisconsin, explains how he built his own demonstration stand by re-making an old typewriting desk. The desk was made taller with longer legs and casters. Another old typewriting desk was also used. Casters were added to the feet making it possible for the instructor to push the desk and typewriter to an individual student in order to give special help.²

The next alternative for elevating the typewriter for demonstration purposes would be to place a box or chair on top of a table. This is usually not as satisfactory as it should be however. It is rather easy to upset the machine, and it is not possible to move the stand around the room for individual work. Some schools used file tops or any other elevated top that might be available. This also has its disadvantages but if nothing else is possible, even a file top might be utilized.

(Rather than have no demonstration at all, the stationary desk or table with an extra typewriter could be used for demonstration purposes.)

¹Ibid., p. 106.

²Lewis R. Oelke, "Typewriting Demonstration Stand," The Balance Sheet, 32:81, October, 1950.

Table 13
Kinds of Demonstration Stands Used
by 55 Schools in North Dakota

Kind Used	Frequency of Mention	Per Cent
Movable factory-made stand	3	5.5
Homemade stand	18	32.7
Chair placed on top of desk	0	0.0
Stationary desk or table as used by other students	30	54.5
Stand higher than tables (Write in)	1	1.8
File top (Write in)	3	5.5

Table 13 reveals the fact that 6 per cent of the schools in North Dakota have a factory-made stand. It is somewhat encouraging, too, to know that 33 per cent of the schools have a home-made stand. Not one school has used a box or chair on top of a table to elevate the demonstration typewriter. Over half of the schools (54 per cent) are using a vacant typewriter for demonstration purposes. This machine is placed on a desk or table similar to that used by other students. A file top was used by 6 per cent of the schools to elevate the typewriter somewhat higher than the ordinary desk or table.

Table 14
 Demonstration by Guest Typist
 by 8 Schools in North Dakota

Type of Guest	Frequency of Mention	Per Cent
Representative from book company	2	25
Representative from typewriting company	6	75
Efficient secretary in community	0	0
Guest typing teacher	0	0
Champion typist (Cortez Peters)	2	25

Demonstration by Guest Expert

It is sometimes desirable to invite a guest speaker or typewriting expert to take over the class for a class period. This kind of demonstration is very effective for motivating typing students. Not only are the students amazed when they note the visitor's high speed, but they also listen with unusually close attention when he tells them "how he got that way."¹ When a guest typist emphasizes the things which the instructor has always stressed, such as, correct posture, correct stroking technique, quick carriage return, etc., students are impressed that the teacher knows what he is talking about after all.

¹Sister M. Speciosa, op. cit., p. 212.

The typewriter companies often provide the school with such services as a demonstration and operation of their latest models of typewriters.¹

Of the 60 schools reporting only 13 per cent of the schools have had a guest typist demonstrate to their classes. As indicated by Table 14, representatives from typewriting companies demonstrated for typewriting teachers most frequently. Two schools reported having had Cortez Peters, a champion typist, demonstrate to their entire student body. Probably the main reason why more schools do not have experts demonstrate to the class is the fact that this involves considerable expense and only a few experts are available. This aid can, however, be of great benefit to the students.

Class Trips

The class trip is being utilized only to a limited extent. During the last thirty or forty years it has become a part of the school program in some regions, but has not reached a recognition status on a national basis.

As an aid to typewriting instruction, the class trip can be very helpful. Getting away from the environment of the regular classroom into a refreshingly new situation gives experiences which greatly aid the educative process. Many office

¹Michael L. Collins, "Visual Aids for Teaching Typewriting,"
The Balance Sheet, 27:58, October, 1945.

managers are anxious to have teachers visit their offices. Typewriting teachers should be encouraged to visit the local offices in their community to observe and study the equipment, office methods, and procedures used in offices.

Nearby business colleges usually have a larger variety of typewriters and other equipment than the small high school. Students should be given the opportunity to see the various kinds of machines. Some of the other equipment such as electro-matic typewriters, teletypewriters, line-a-time devices, and numerous other modern office machines and aids may be seen and explained on a school journey.¹

Some of the places that would probably be available in most communities for class trips are banks, business offices, post offices, telephone offices, insurance offices, law offices and others. After the class trip has been made, class reports and discussions can be required to clear up any questions or problems that the students may have. Class reports would motivate the students to be more observing while on the trip.

A number of authors list advantages of the class trip. Richard Wright lists the following advantages of the school journey if properly used:²

1. The school journey is a cooperative enterprise. Teacher and children join in the project with the child an active agent and the teacher the counselor and guide.

¹Michael L. Collins, op. cit., p. 58.

²Richard G. Wright, op. cit., pp. 51-52.

Table 15
Purpose for Which Class Trips Are Being Used
by 5 Schools in North Dakota

Purpose	Positive Responses	Negative Responses	Positive Responses (Per Cent)
Motivational purposes	4	1	80
Entertainment	2	3	40
See special equipment	3	2	60
See office forms used and office procedures	2	3	40
Explore work conditions	3	2	60

2. Shows phenomena in their natural settings.
3. Put children in direct touch, under learning situations, with things, persons, movements, relationships, environments, occupations, trends, and functionings.
4. Offers opportunities for socializing instruction and blending school activities with community life.
5. Supplies concrete, realistic, meaningful elements.
6. Connects directly objects of knowledge with their respective symbols.

Not much has been done in North Dakota with class trips as an aid to typewriting instruction. Only 5 of the 60 schools reporting had the typewriting class go on a field trip. As indicated by Table 15, motivational purposes received a positive response of 80 per cent. The next most important reason for

using class trips was for seeing special equipment and exploring work conditions, both received a positive response of 60 per cent.

CHAPTER V

AIDS TEACHERS OF TYPEWRITING IN NORTH DAKOTA WOULD LIKE TO HAVE

After making a careful study of each of the audio-visual aids discussed in this thesis, it is evident that the failure to use the aids lies not entirely with the teacher but rather with the schools for not providing the proper facilities. In some cases, however, the failure to have these aids may rest with the teacher for not requesting such things as films and demonstration stands.

In the final portion of the questionnaire the teachers were asked to list the equipment and other material aids which they do not have at the present time but would like to have as an aid to their typewriting instruction. The responses to this question were very interesting. Some of the schools listed several things they would like to have while others listed only one or two things. Table 16 reveals that films were mentioned more frequently than any other aid. Films were mentioned 33 times. The demonstration stand was listed 27 times while adjustable typewriting desks received the third highest frequency of mention. The other less frequently mentioned aids are also listed on Table 16.

Table 16
Aids 42 Teachers of Typewriting
in North Dakota Would Like to Have

Aid	Frequency of Mention
Films	33
Demonstration stand	27
Individual adjustable typewriting desks	10
Filmstrips	8
More blackboard space	5
Phonograph with records	5
More bulletin board space	4
Charts (keyboard, wall progress, etc.)	4
Metronome	4
Stop watch with bell	3
Book holders	3
Better typewriters	3
Opportunity to visit offices	2
Demonstration typewriter	2
Better typewriting books	2
Electric typewriters	2
Demonstration by expert	2
Tapbell	1
File	1
Lantern slides	1
Office style chairs	1
Dictaphone	1
Long carriage typewriter	1
Dictionary at each desk	1
Curtains to darken typing room	1

The teachers of typewriting in North Dakota have indicated by their responses that they would like to use more of the audio-visual aids than they are at the present time but they are handicapped by lack of equipment.

As the administrators become educated to the value of such aids as the films, demonstration stands, adjustable desks, filmstrips, phonographs, etc., more teachers will be using them in the future.

CHAPTER VI

FUTURE USE OF AUDIO-VISUAL AIDS

The future use of audio-visual aids will depend largely on the business teachers. Although audio-visual aids are not new, films and filmstrips still are not being used as extensively as they could be. Teachers and administrators complain about the high purchase price of films, but the high cost can partly be attributed to the teachers themselves. The commercial, professional producer of audio-visual aids would like to know what aids teachers want and whether they will use them if they are produced. Films must be used in large quantities before the producer can be adequately remunerated for the time, money, and energy he invests.¹ We may ask, "How much does it cost to make a teaching film?" The average cost of a professionally produced 16mm sound motion picture will run approximately \$1,000 a minute. A ten minute film may cost \$5,000 to \$70,000 to make. At an average of \$10,000, it would require the sale of 700 to 1,000 prints to amortize the cost. The average price tag on a black and white film runs around \$45 to \$60. Teachers often think the producers are "getting rich" at their expense. The trouble is that the number of copies is so small that most

¹E. Dana Gibson, "You Have A Stake in Audio-Visual Aids," Business Education World, 32:275, February, 1952.

producers lose money, even at these prices. They continue to invest, hoping that their investment will help the market to grow to a practical level.¹

Why then, do teachers have a stake in audio-visual aids? The answer is obvious. Unless teachers and administrators are willing to pay for a good educational typewriting film, producers will not be able to film the kind of motion picture that the teachers demand. E. Dana Gibson says, "If each public and private school in the country giving commercial courses were to buy one print of each educational film that fits its curriculum, there would be no problem of finance."

Even the best of schools are still unwilling to make an adequate investment in good typewriting films. Teachers have not become audio-visual conscious as a group and not until they do, will the producer be willing to produce good films in greater quantities.²

¹William F. Kruse, "The Business of Education Films," Business Education World, 30:122, November, 1949.

²E. Dana Gibson, op. cit., p. 276.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

As stated in Chapter I, the purpose of this study was to find out what audio-visual aids are being used and the reasons for them being used; to determine the aids available for use; and to make suggestions for the effective use of these audio-visual aids.

A thorough study was made of all the material available on audio-visual aids in business education and typewriting. The tabulated results of the questionnaire indicate that (teachers of typewriting are not using audio-visual aids very extensively.) Blackboards, bulletin boards, charts, textbook illustrations, and teacher demonstrations were used the most. Such aids as films, filmstrips, phonographs, metronomes, demonstrations by guest experts and class trips were used very little.) These aids which were seldom or never used involved a greater expenditure of money and time than those aids which were used often.

In most instances the purposes for which these aids were used are the same as those recommended by the authorities on audio-visual aids in business education and typewriting. As an example, the blackboard is being used a great deal for assignments, having a positive response of 82 per cent. Blackboards were also used to a great extent for teaching techniques of tabulation and centering. Both received a positive response of 80 per cent.

It was interesting to find that although films and filmstrips were not used very much as an aid to typewriting instruction, teachers did indicate they wanted films and filmstrips. This survey revealed that of the 60 schools reporting, 33 schools indicated a desire for films and 10 mentioned filmstrips.

A study was made of the films and filmstrips which are available for rent and for sale. The list of films which are given in Chapter IV were found in film guides, periodical literature, and unpublished materials. Suggestions for the effective use of audio-visual aids were made for each of the aids discussed.

The following recommendations are made after a study of the use of audio-visual aids by teachers of typewriting in North Dakota:

1. Business education teachers should be required to take courses of instruction in the use of audio-visual aids.
2. More motion pictures and filmstrips should be produced to aid the teaching of typewriting.
3. Teachers should purchase motion pictures and filmstrips if funds can be arranged.
4. Teachers should try to rent more motion pictures and filmstrips if the price is a prohibitive factor for purchasing them.
5. Teachers of typewriting should make better use of the audio-visual aids they already have.
6. Students should take part in keeping an attractive bulletin board.
7. Schools should provide the typewriting teacher with a moveable demonstration stand.

8. Guest typists should be invited to demonstrate to the typewriting class.
9. Students should go on a field trip to visit the local business offices.
10. Teachers of typewriting should read current literature concerning the use of audio-visual aids in education and business education in order to keep abreast with the newer methods of teaching typewriting.

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APPENDICES

APPENDIX A

405 First Avenue South
Grand Forks, North Dakota
April 8, 1952

Teacher of Typewriting:

Enclosed is a self-addressed envelope and a questionnaire for the purpose of finding out what Audio-Visual Aids are being used, and what equipment typewriting teachers do not have but would like to have.

The information will be used in the preparation of a Master's Thesis at the University of North Dakota. Questions and study were approved by Dr. A. Bjork, Associate Professor of Education and Dr. M. Adeline Olson, Assistant Professor of Business Education, University of North Dakota.

Please check the questions only for the aids you use. If the aid is not used, simply check "never used." If you are using aids which are not listed, please list them in the spaces provided.

Thank you for your cooperation.

Sincerely yours,

Adolph Beich

APPENDIX B

Questionnaire

- I. Please check the following information concerning the Audio-Visual Aids you use in the teaching of typewriting. Check only "never used" for those aids which you do not use.

PROJECTED AIDS

Films: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose: Introduction to unit ___ Keyboard presentation ___ Teaching techniques ___ Supplementary knowledge ___ Review ___ Summary ___ Others _____
2. Films are: Purchased ___ Rented _____
3. Are budget allowances set up for renting or purchasing films or other typewriting projected aids: Yes ___ No ___ If so, how much per year? _____
4. What films have you used within this school year? List titles? _____

Filmstrips: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose: Introduction to unit ___ Keyboard presentation ___ Teaching techniques ___ Supplementary knowledge ___ Review ___ Summary ___ Others _____
2. Filmstrips are: Purchased ___ Rented _____
3. What filmstrips have you used within this school year? List titles? _____

List other projected aids used, such as: lantern slides, opaque projector, etc.

UNPROJECTED AIDS: (List below contains only suggested aids and uses)

Blackboards: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose:
 - ___ Assignments
 - ___ Announcements
 - ___ Conducting drill work
 - ___ Lesson directions
 - ___ Margin setting techniques
 - ___ Tabulation techniques
 - ___ Vertical and horizontal centering
 - ___ Others, list _____

Bulletin Board: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose:

- ___ Special announcements
- ___ Cartoons to create interest and stimulate thinking
- ___ Student's work (Perfect drill work, perfect letters, etc.)
- ___ Stories concerning local typists who have become successful
- ___ Pictures of expert typists
- ___ Pictures of electric typewriters and other equipment
- ___ Literature from typewriting companies
- ___ Special art designs prepared on the typewriter
- ___ Others, list _____

Charts: Often Used ___ Seldom Used ___ Never Used ___

1. If used, what kinds:

- ___ Keyboard wall charts
- ___ Teacher-made progress charts
- ___ Workbook error analysis and progress charts
- ___ Check lists on the specific techniques, such as: body posture, carriage throw, stroking, machine manipulation, etc.
- ___ Wall progress charts
- ___ Others, list _____

Textbook Illustrations and Flat Pictures: Often Used ___
Seldom Used ___ Never Used ___

1. If used, for what purpose:

- ___ Correct arm, hand, and body posture
- ___ Illustrating new equipment
- ___ Illustrating typewriting technique
- ___ Teaching letter styles
- ___ Others, list _____

Phonograph: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose:

- ___ Stimulating interest
- ___ Developing speed
- ___ Developing rhythm
- ___ Developing accuracy
- ___ Others, list _____

Metronome: Often Used ___ Seldom Used ___ Never Used ___

1. If used, for what purpose:

- ___ Stimulating interest
- ___ Developing speed
- ___ Developing rhythm
- ___ Developing accuracy
- ___ Others, list _____

Teacher Demonstration: Often Used ☐ Seldom Used ☐
Never Used ☐

1. If teacher demonstrates, what kind of demonstration stand is used:

☐ Movable factory-made stand
☐ Homemade stand
☐ Chair placed on top of desk
☐ Stationary desk or table as used by other students
☐ Others, list _____

2. For what purpose is demonstration used:

<input type="checkbox"/> Paper insertion and removal	<input type="checkbox"/> Centering
<input type="checkbox"/> Correct stroking	<input type="checkbox"/> Crowding and spreading
<input type="checkbox"/> Carriage return techniques	<input type="checkbox"/> Erasing
<input type="checkbox"/> Tabulator techniques	<input type="checkbox"/> Letter styles
<input type="checkbox"/> Marginal adjustments	<input type="checkbox"/> Eyes on copy
<input type="checkbox"/> Correct posture	<input type="checkbox"/> Motivation

☐ Others, list _____

Demonstration by Expert Typist: Yes ☐ No ☐

☐ Representative from book company
☐ Efficient secretary in community
☐ Guest typing teacher
☐ Others, list _____

Class Trips: Often Used ☐ Seldom Used ☐ Never Used ☐

1. If used, for what purpose:

☐ Motivational purposes
☐ Entertainment
☐ See special equipment such as an automatic typewriter, etc.
☐ See office forms used, techniques of using carbon copies, erasing, etc.
☐ Explore work conditions of typists
☐ Others, list _____

II. Please list equipment and other material aids that you do not have at the present time but would like to have, for example: demonstration stand, typing films, etc.

- 1.
- 2.
- 3.
- 4.
- 5.

APPENDIX C

North Dakota High Schools from which returns were received:

Anamoose	Hebron
Ashley	Hope
Beach	Kenmare
Berthold	Kulm
Beulah	Langdon
Bismarck	Larimore
Bowman	Leeds
Carson	Linton
Cavalier	Lisbon
Columbus	Maddock
Crosby	Mandan
Devils Lake	Minot
Dickinson	Minot (S.T.C.H.S.)
Dickinson (S.T.C.H.S.)	Minto
Drake	McClusky
Drayton	Michigan
Edgeley	Milnor
Grand Forks	Mott
Hankinson	New Rockford
Harvey	New Salem
Hazelon	Northwood
Hazen	Park River

Parshall

Rolette

Rugby

Sherwood

Steele

Strasburg

Towner

Turtle Lake

Valley City

Valley City (S.T.C.H.S.)

Wahpeton

Walhalla

West Fargo

Wilton

Wishek

Zeeland

APPENDIX D

Name _____

TYPEWRITING TECHNIQUE CHECK SHEET

I. EYES--on the copy_____

- 1. Looking for home row
- 2. Watching keys
- 3. Watching paper in machine
- 4. Watching for end of line
- 5. Looking up between lines

II. POSITION_____

A. Body

- 1. Sit nearer typewriter
- 2. Sit away from typewriter
- 3. Lean from hips toward type-
- 4. Shoulders erect (writer
- 5. Feet on the floor
- 6. Body well balanced

B. Wrists

- 1. Lower wrists
- 2. Raise wrists

C. Fingers

- 1. Relax fingers
- 2. Curve fingers more
- 3. Fingers curved too much
- 4. Finger nails too long

D. Thumbs

- 1. Curve right thumb over space (bar
- 2. Curve left thumb under palm

III. CARRIAGE THROW_____

- 1. Too much hand motion
- 2. Too much arm motion
- 3. Sluggish movement
- 4. Return hand to home row (quickly
- 5. Throw carriage with more (even power

IV. PAPER_____

- 1. Insertion--twirl (cylinder knob
- 2. Removal--use paper (release
- 3. Paper edge guide set (for equal margins
- 4. Paper bail--evenly (spaced clamps

V. KEY STROKE_____

- 1. Use snatch stroke (do not push keys)
- 2. Touch must be more even
- 3. Use lighter stroke (quick getaway)
- 4. Use more forceful stroke (well controlled)
- 5. Incorrect fingering on
- 6. Do not raise fingers (so high
- 7. Relax muscles of shoulder, forearm, wrists, hands

VI. SHIFT KEY_____

- 1. Hold key down--capitals (in line
- 2. Little finger on shift key; other fingers hovering over home row keys

VII. SPACE BAR_____

VIII. BACK SPACE_____

- 1. Use nearest finger

TECHNIQUE CHECK SHEET (Continued)

I. TABULATOR_____

- 1. Hold key down until carriage
(stops moving)
- 2. Use nearest finger

II. ACTION_____

- 1. Fingers
- 2. Wrists
- 3. Arms

XI. ACCURACY_____

- 1. Control--strike keys
(deliberately)
- 2. Develop more even
rhythm

XII. RATE

- 1. Too fast
- 2. Too slow
- 3. Jerky

APPENDIX E

Progress Chart

Date	1-M	Date	3-M	Date	5-M	Date	10-M	Date	15-M

281804